IN THE CLAIMS

Claims 1-12 (cancelled).

13 (currently amended): ~~A robot~~ An apparatus comprising an end effector for transporting articles between different stations, the end effector holding an article as the article is being transported between different stations, the end effector comprising a rotational member ~~rotational relative to the end effector~~, to allow an article held in the end effector to rotate around an axis passing through the article.

14 (currently amended): The ~~end effector~~ apparatus of Claim 13 wherein the end effector further comprises: a body to which the member is coupled and around which the member is rotational; and a device for pressing the article against the member when the end effector is holding the article.

15 (currently amended): The ~~end effector~~ apparatus of Claim 14 wherein the device comprises a vortex chuck to emit a gas vortex towards the article.

16 (currently amended): The ~~end effector~~ apparatus of Claim 15 wherein the vortex chuck is mounted in the body.

17 (currently amended): ~~A robot~~ An apparatus comprising an end effector for transporting articles between different stations, the end effector holding an article as the article is being transported between different stations, the end effector comprising a mechanism for holding an article and rotating the article around an axis passing through the end effector.

18 (currently amended): The ~~end effector~~ apparatus of Claim 17 wherein the end effector further comprises: a rotational body ~~to which the member is coupled and around which the member is rotational~~; and a device for pressing the article against the body ~~member~~ when the end effector is holding the article.

19 (currently amended): The ~~end effector~~ apparatus of Claim 17 wherein the device comprises a vortex chuck to emit a gas vortex towards the article.

20 (currently amended): The ~~end effector~~ apparatus of Claim 19 wherein the vortex chuck is mounted in the body.

Claims 21-24 (cancelled).

25 (new): The apparatus of Claim 13 wherein in addition to being rotatable around the body, the member movable relative to the body in a direction transversal to the article, the member yielding when the end effector presses the article against a surface.

26 (new): The apparatus of Claim 25 further comprising a spring plate rigidly attached to the body and contacting the member on a side opposite from the article, to prevent uncontrollable rotation of the member and to allow the member to yield when the article is pressed against a surface.

27 (new): The apparatus of Claim 13 wherein the articles are semiconductor wafers.

28 (new): The apparatus of Claim 13 wherein the different stations include one or more of: a wafer storage cassette, a wafer shipment container, an etching station, a deposition station, a film frame machine for attaching adhesive film frames to wafers, a dicing station.

29 (new): The apparatus of Claim 13 further comprising a robot comprising an arm to which the end effector is attached.

30 (new): The apparatus of Claim 13 wherein the apparatus is programmed to:

pick up an article by the end effector from a first station;

carry the article to a second station to perform a rotational orientation of the article in the end effector without the end effector releasing the article; and

after the rotational orientation, carry the article in the end effector to a third station.

31 (new): The apparatus of Claim 30 wherein the apparatus is programmed to place the article at the third station, the article remaining in the end effector from the time the article was picked up at the first station and up to the time the article is placed at the third station.

32 (new): The apparatus of Claim 17 wherein the articles are semiconductor wafers.

33 (new): The apparatus of Claim 17 wherein the different stations include one or more of: a wafer storage cassette, a wafer shipment container, an etching station, a deposition station, a film frame machine for attaching adhesive film frames to wafers, a dicing station.

34 (new): The apparatus of Claim 17 further comprising a robot comprising an arm to which the end effector is attached.

35 (new): The apparatus of Claim 17 wherein the apparatus is programmed to:

pick up an article by the end effector from a first station;

carry the article to a second station to perform a rotational orientation of the article in the end effector without the end effector releasing the article; and

after the rotational orientation, carry the article in the end effector to a third station.

36 (new): The apparatus of Claim 35 wherein the apparatus is programmed to place the article at the third station, the article remaining in the end effector from the time the article was picked up at the first station and up to the time the article is placed at the third station.